

The Director's Proton Team

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- Membership
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- Homework and Some Issues
- Assignments
- Modifications, Collaboration, Organization

From: Michael Witherell

To: David Finley

Thank you for agreeing to chair a committee to advise me on the use of protons at Fermilab through the end of the decade.

I am pleased that Janet Conrad of MiniBooNE and Doug Michael of MINOS have already agreed to serve on this committee. It is important that these neutrino experiments succeed as part of the Fermilab physics program. We all know that neutrino experiments do better the more protons are available. I expect your team to come up with a quantified realistic estimate of how many protons we can expect to provide. All users of protons should be included in your deliberations, of course. I am particularly concerned that the collider program continue to get the protons they need.

To be more specific, I would like you to

- 1) Identify users of protons over the period 2003-2010 and the demands represented by each.
- 2) Establish technical goals for delivery of protons, both from the Booster and Main Injector, over the period.
- 3) Identify major modifications to the Proton Source and Main Injector that will be required to meet these goals assuming availability of Fermilab resources at the few x \$10M level over the period.
- 4) Identify possible resources and opportunities for collaboration by institutions outside Fermilab.
- 5) Suggest an organization for implementing a program of modifications, including opportunities for integration of collaborators outside Fermilab.

I want you to be prepared to provide a verbal status report at the April PAC, and a final written report before the June PAC at Aspen.

Charge

(Draft of MW to DF 2/19/03)

- 1) Identify users of protons over the period 2003-2010 and the **demands** represented by each.
- 2) Establish technical **goals** for delivery of protons, both from the Booster and Main Injector, over the period.
- 3) Identify major **modifications** to the Proton Source and Main Injector that will be required to meet these goals assuming availability of Fermilab resources at the **few x \$10M** level over the period.
- 4) Identify possible resources and opportunities for **collaboration** by institutions outside Fermilab.
- 5) Suggest an **organization** for implementing a program of modifications, including opportunities for integration of collaborators outside Fermilab.

Charge

(Draft 1/29/03 for reference)

- Witherell to Finley
- Draft of Holmes 29 January "Identify users of protons over the period 2003-2010 and the demands represented by each. Establish realistic technical goals for delivery of protons, both from the Booster and Main Injector, over the period. Identify major modifications to the Proton Source and Main Injector that will be required to meet these goals assuming availability of Fermilab resources at the few x \$10M level over the period. Identify possible resources and opportunities for collaboration by institutions outside Fermilab. Suggest a organization for implementing a program of modifications, including opportunities for integration of outside collaborators."

Membership

- David Finley Chair
- Janet Conrad Co-spokesperson of MiniBooNE
- Doug Michael Co-spokesperson of MINOS

- Chuck Ankenbrandt Booster and Beam Physics
- Peter Kasper Booster
- Alberto Marchionni Main Injector Beam

- Eric Prebys Head of Booster
- Shekhar Mishra Head of Main Injector

- Ray Stefanski Secretary

Note: There is some overlap among Kasper, Prebys and Stefanski

Membership

• David Finley	Chair	MiniBooNE
• Janet Conrad	co-spokesperson of	MiniBooNE
• Doug Michael	co-spokesperson of	MINOS
• Chuck Ankenbrandt	Booster Beam Physics	-----
• Peter Kasper	Booster	MiniBooNE
• Alberto Marchionni	Main Injector Beam	MINOS
• Eric Prebys	Head of Booster	MiniBooNE
• Shekhar Mishra	Head of Main Injector	-----
• Ray Stefanski	Secretary	MiniBooNE

Honorary Membership

- Some Contacts and Kibitzers

- Greg Bock NuMI Project Leader MINOS
- Elliott McCrory Head of Proton Source
- Roger Dixon Head of Beams Division
- Mike Church Deputy Head of Beams Division

- Steve Holmes Associate Director for Accelerators
- Hugh Montgomery Associate Director for Physics

These people and many others will be “interviewed” for their input.

Schedule

(as seen on February 12, 2003)

- Thursdays Noon to 130PM Racetrack (WH7X)*
 - Initial meeting 2/20 in WH1NE (“The Board Room”)
 - And February 28 meeting in WH1NE also
 - Racetrack has Video Link
 - Members report on findings
- ~ March 15: Brief Witherell et al.
- ~ March 29: PAC Verbal Briefing by Finley <<<***>>>
- May 1 Draft Written Report (in Word)
- ~ June 1 Final Written Report
- ~ June 15 Aspen PAC Briefing (if necessary)
 - * Greg Bock has a weekly conflict

Homework

- 3M Report (Michael / Martin / Marchionni) 2002
 - http://tdserver1.fnal.gov/Finley/NuMI_Proton_Intensity_Report.pdf
 - This should be moved to the Proton Team Web Site
- Peter Kasper's talk to PAC 2002
 - Is this on the Proton Team Web Site?
- Eric Prebys' talk to AAC 2003
 - <http://www-bd.fnal.gov/aac/>

Some Issues

- Running MiniBooNE and NuMI contemporaneously
 - **con•tem•po•ra•ne•ous** *adj.* Originating, existing, or happening during the same period of time as in *the contemporaneous reigns of two monarchs*.
- Administration of controlled vs. uncontrolled losses
- Intensity and/or scheduling
 - “\$\$\$, people, time” and/or Program Planning
 - Linac and MI Fixed Target are scheduling (I suspect)
 - NuMI, MiniBooNE, Run II are Intensity
- Better protection for workers
- And ...

Assignments

- Finley: Chair
 - Outline of the Report and verbal reports
- Stefanski: Secretary
 - Take minutes and email them by “next Tuesday”
 - Will be one source for the Report
 - Send to all members including honorary ones
 - Use lots of enclosures and web addresses
 - Elliott McCrory has provided us with a web site

Assignments

- I do not want to halt ongoing activities, so
 - Prebys: Ongoing activities in Booster
 - Mishra: Ongoing activities in MI ... and Bock's plans

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Assignments: Beam Demands

- Primary / Helpers
 - Linac: Finley / Ankenbrandt
 - Booster, NTF, MUCOOL, Studies ...
 - Booster: Prebys / Kasper, Conrad
 - MiniBoone, Main Injector, Radiation Facility, Studies ...
 - Main Injector: Mishra / Marchionni, Michael
 - Run II, NuMI, MI Fixed Target, Studies ...

Assignments: Realistic Delivery Goals

- Primary / Helpers
 - Linac: Finley
 - Booster, NTF, MUCOOL, Studies ...
 - Booster: Prebys / Ankenbrandt, Conrad
 - MiniBoone, Main Injector, Radiation Facility, Studies ...
 - Main Injector: Mishra / Marchionni, Michael
 - Run II, NuMI, MI Fixed Target, Studies ...

Modifications and Money

- Include
 - Addressing of Issues and
 - Changes to Operations
 - Salaries, collaborations ... but not much money
- Include projects ... and big money here
 - Tasks: People, time, money
 - We'll advise on priorities as necessary
- Include the kitchen sink initially ...
 - and then relegate some of them to “The List of Things Management Can Decide On” and drop some of them.

Collaborations

- Booster
 - Conrad & Prebys with help from Michael
- Main Injector
 - Michael & Mishra (and Bock)

Organization

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